CONTROL # 09/803067 (AMENDED)

ABSTRACT

A METHOD FOR ACHEIVING A 5 LOG REDUCTION OF PATHOGENS (99.99%) IN JUICES USING A ULTRA VIOLET GENERATED ACTIVATED OXYGEN GAS. THIS PROCESS WAS APPROVED BY THE FDA IN JUNE 26, 2001 (REFERENCE : FEDERAL REGISTER. VOL. 66, NO 123 PAGE 33829). THE ULTRA VIIOLET LAMP CREATES A SPECIFIC WAVE LENGTH (185 NANO METER) WHICH DESTROYS (BY OXIDATION) PATHOGENS ON CONTACT. THE ACIVATED OXYGEN GAS IS INTRODUCED INTO A CONTAINER HOLDING THE JUICE BY USING A SPARGING SYSTEM WHICH DELIVERS THE ACTIVATED OXYGEN GAS IN 20 TO 60 MICRON BUBBLES IN THE CONTAINER (SATURATING THE JUICE) WHICH ALLOWS ACTIVATED OXYGEN GAS CONTACT WITH THE PATHOGENS, THUS ACHEIVING THE FDA REQUIRED 5 LOG REDUCTION IN PATHOGENS. THE ACTIVATED OXYGEN SYSTEM AND SPARGING SYSTEM ARE ALSO DISCLOSED.

THIS METHOD DOES NOT DESTROY THE ENZYMES IN THE LIQUID AS ALL PASTEURIZATION SYSTEMS DO (ANY TEMPERATURE OVER 123 DEGREE F DESTROYS ALL ENZYMES).

28 CLAIMS 3 DRAWING SHEETS

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